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Dear Sir or Madam

Re: Response to Second Written Opinion
PCT Patent Application No: PCT/SG03/00078
Applicant: Malaysia Woodworking Pte Ltd
Title: Fabrication of Hollow Door Using Modular Panel Rib Components Made from Scrap Wood
Our ref: 1237.P004PCT/CKM

We refer to the above PCT patent application and the written opinion dated 8 September 2003 and thank you for finding the present invention to be novel and industrially applicable.

Attached is our response further clarifying how the present invention is inventive. We look forward to a favourable reply.

Thank you.

Yours sincerely
LAWRENCE Y D HO & ASSOCIATES PTE LTD

Chan Kay Min

Encl: Response to Second Written Opinion for PCT/SG03/00078

Response to Second Written Response for PCT/SG03/00078

We appreciate this opportunity to respond to the examiner's second written opinion and are happy to note that the examiner has found all the claims novel over the prior art and have industrial applicability.

We concur with the examiner that recycling and reusing materials to reduce cost is paramount in any art. However, ironically, despite all good intentions, this is not done. Instead, scrap material is collected by specialised recycling companies and rendered into other forms for recycling as users (or generators of these materials) think that it is more cost effective to do so. The scrap material is hardly if ever used in their scrap form.

In a metal workshop, for example, scrap material is usually tossed into scrap bins sorted by type of metals (ie steel, aluminum and other metals). The only remaining category of scrap metal is called filings which is swept up and thrown away, like salt that has lost its flavour, never to be recycled. The metal scrap is then re-melted and resold as lower-quality metal.

Consider the situation if the present invention was to be practised in an analogous fashion in a metal workshop. This will mean that the user has to rummage through the scrap metal bins for material, machine the scrap metal material into modular pieces, and then to use these modular pieces in the fabrication of a product. This is simply not done... yet.

Similarly in a wood workshop, the scrap wood is used, as I have listed in my first response, mainly as backing material when machining wood. Such material is considered as scrap for the simple reason that the users do not use them as major components in the fabrication of their products.

The trend in the art of hollow doors has already moved away from using wood strips to paper honeycombs. And the cause of this practice is governed by cost. Wood is simply much more expensive than paper honeycomb and even the generation of large quantities of scrap wood does not motivate the user to continue using wood for the construction of hollow doors.

The mental efforts of the generator of scrap wood, or user, is probably directed towards how much money the recycling company will pay him for the scrap wood, or how much the disposal company will charge him to haul the scrap wood to the incinerator.

The user's thoughts are at all not directed towards using the scrap wood for other purposes because in his mind, the scrap wood is, well, just scrap wood.

As the easier option of not using scrap wood is in fact reality, then the imaginative idea of systematically preparing (present patent application

paragraphs 43-47) and using wood hitherto considered only good as scrap for fabrication material should be viewed as inventive.

The present invention must be viewed holistically. Not only is scrap wood turned into useful components, the various methods of arranging the modular components made from scrap wood dovetails neatly to offer the practitioner numerous options of utilising these modular components. Thus we see Claims 2-8, and 11-18 as integral to the practice of the present invention. We contend that these dependent claims are inventive when appended to the main independent claims.

In the examiner's written opinion, he stated that the person skilled in the art (PSA) will take these short scrap pieces and use them for fabricating longer pieces. This observation is only true to a certain extent. If the PSA does so, he will only use these built-up pieces in non-loading bearing or light loading members in a piece of furniture. An example of such an application would be say, a rectangular piece of handle for a drawer or door knob. It would be unwise to place them in areas where structural strength is needed.

Again, we contend that the present invention is inventive as this requirement for structural strength is achieved in a non-obvious manner. By placing modular ribs fabricated into long useable strips according to the method of the present invention into door frame during assembly and further applying adhesive to the members (paragraphs 48-52), the structural strength offered by the modular panel ribs is significantly increased. It is not obvious that such utility is possible from modular components obtained from scrap wood. If more strength is required, a higher density of latticework may be used (paragraph 56).

In addition, the handling of a latticework of panel ribs is much easier than manhandling a paper honeycomb which has to be stretched and then fastened in place (paragraph 54). This allows faster assembly of the hollow structure.

In conclusion, we respectful submit that the present invention is inventive. It allows scrap wood destined for disposal to be used as major components in the fabrication of hollow wood structures. This usage is non-obvious as evident by the lack of this practice in workshops, products in the market or patents alluding to such use.

In addition, the present invention also teaches a more cost-effective way of assembling hollow wood structures using the modular components. The methods of the present invention such as use of connector blocks (paragraph 35 and FIG. 3) allow for flexible layout of the modular components.

We hope that our arguments can convince the examiner that the present invention is indeed non-obvious and inventive. Allowance of this application will

allow a more efficient use of wood - a declining natural resource, instead of consigning scrap wood for disposal or recycling into paper or chipboard.

In the future, when wood becomes more limiting, perhaps then, PsSA may very well use the techniques taught in the present invention to maximise the use of scrap wood. Until then, the present inventor is the one who exercised ingenuity and imagination to do so, before any other PsSA.

The examples of further using scrap wood as given in the present invention may well encourage other inventors to pursue such inventions to further maximise our use of wood to the fullest.

We sincerely hope that the Examiner will reconsider the present application in the light of the points presented above and we look forward to a favourable reply. Nevertheless, we request the Examiner for additional opportunities to submit amendments or arguments in the future as appropriate and opportune.

Thank you.